Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (currently amended) A method of forming thin silicon oxide film, comprising the steps of:

providing a silicon carbide substrate;

providing an afterglow thermal reactor;

employing said afterglow thermal reactor to create an oscillating radio frequency electric field;

~~passing~~ exciting an oxidizing gas to an excited state of energy by passing the oxidizing gas through ~~an~~the oscillating radio frequency electric field~~, wherein the gas achieves an excited state of energy~~; and

contacting the substrate with the excited gas at a predetermined temperature.

2. (canceled)

3. (canceled)

4. (currently amended) The method of claim 1, ~~wherein~~ further comprising the step of selecting the oxidizing gas ~~is selected~~ from the group consisting of molecular oxygen, atomic oxygen, excited molecular O_2 (singlet delta g state), and nitrogen oxides.

5. (original) The method of claim 1, further comprising the step of maintaining the oxidizing gas at a temperature range between 600°C to 1,200°C.

6. (original) The method of claim 1, further comprising the step of maintaining the oxidizing gas at a pressure less than 50 torr.

7. (currently amended) The method of claim 6, ~~wherein the pressure is maintained~~ further comprising the step of using a vacuum pump to maintain the pressure.

8. (canceled)

9. (currently amended) A method of forming thin silicon oxide film, comprising the steps of:

providing a silicon carbide substrate within a tube;

~~passing~~ exciting an oxidizing gas to an excited state of energy by passing the oxidizing gas through an oscillating radio frequency electric field~~, wherein the gas achieves an excited state of energy~~; and

contacting the substrate with the excited gas, ~~wherein~~ maintaining the tube and substrate ~~is maintained~~ at a temperature range between 600°C to ~~1200°C~~1,200°C, and at a pressure less than 50 torr.

10. (currently amended) A method of forming a thin film of silicon oxide ~~film,~~ comprising the steps of:

~~providing a silicon carbide substrate within a tube, wherein the tube is in contact with a furnace, and wherein the tube is connected to a pump;~~

providing a furnace;

providing a tube;

providing a pump that is in fluid communication with the tube;

positioning a silicon carbide substrate within the tube;

providing an afterglow plasma source;

passing an oxidizing gas through ~~an~~ the afterglow plasma source~~, wherein~~ so that the gas achieves an excited state of energy;

adding a secondary gas to the excited gas to produce an excited gas mixture; and

contacting the substrate with the excited gas mixture, ~~wherein~~ using the furnace to maintain the tube ~~is maintained~~ at a temperature between 600°C to ~~1200°C~~ 1,200°C ~~by the furnace~~, and ~~wherein~~ using the pump to maintain the tube ~~is maintained~~ at a pressure less than 50 torr ~~by the pump~~.

11. (new) A method of forming thin silicon oxide film, comprising the steps of:

providing a silicon carbide substrate;

providing a microwave cavity;

employing said microwave cavity to create an oscillating radio frequency electric field;

exciting an oxidizing gas to an excited state of energy by passing the oxidized gas through the oscillating radio frequency electric field;

positioning the substrate in remote relation to said microwave cavity;

contacting the substrate held at a predetermined temperature with the excited gas.

12. (new) The method of claim 11, further comprising the step of selecting the oxidizing gas from the group consisting of molecular oxygen, atomic oxygen, excited molecular O_2 (singlet delta g state), and nitrogen oxides.

13. (new) The method of claim 11, further comprising the step of maintaining the oxidizing gas at a temperature range between 600°C to 1,200°C.

14. (new) The method of claim 11, further comprising the step of maintaining the oxidizing gas at a pressure less than 50 torr.

15. (new) The method of claim 11, further comprising the step of using a vacuum pump to maintain the pressure.

16. (new) The method of claim 11, further comprising the step of securing the silicon carbide substrate onto a heated zone.